• 計畫中文名稱	關節炎治療之研究---中藥萃取物(威靈仙等)之運用(II)		
• 計畫英文名稱	Research of Study on the Molecular Mechanism of Anti-Arthritis by Chinese Herbal (Triptolide and Clematidis Radix) (II)		
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• 研究人員	謝銘勳		
• 中文關鍵字	雷公藤；威靈仙；關節炎；間質分解酵素；；；；		
• 英文關鍵字	osteoarthritis；Clematidis Radix；hyaluronic acid；MMPs；TNF；IL-1；Triptolide；		
• 中文摘要	「威靈仙」屬傳統中藥的一種,分佈於中國東北、華南各地,其根莖部可萃取出三帖類皂苷(triterpenoid)，在傳統中醫典籍中多用於痺症(關節炎)的治療，然而其治療機轉仍不是很清楚。因此，我們想要藉著與雷公藤的比較分析，來得到初步的結果。我們選用威靈仙作爲研究的目的：1. 全國所有的 GMP 藥廠中都有威靈仙的單方濃縮製品。2. 威靈仙爲安全且常用的藥物。3. 臨床上已證實其對痺症具有療效。4. 其治療機制仍不明確，須更多相關深入的研究。「雷公藤」屬中草藥的一種，分佈於中國及日本。自古以來人們就發現其根皮是極有效的驅蟲藥物，它還有祛風去濕、活血消腫、消炎止痛、治療慢性關節炎的功用。目前已知雷公藤根部可萃取出上百種化合物，其中雷公藤內脂醇(Triptolide)在許多文獻中都證實其見有調節免疫系統功能，但其對關節炎的治療機制却不是很清楚。而關節炎病變過程中，間質分解酵素(Marrix metalloproteinase, MMPS)的異常表現扮演很重要角色，因此本計畫希望透過細胞實驗方式，探討雷公藤內脂醇(Triptolide)是否會對軟骨細胞的間質分解酵素有所影響。方法：探討中藥材對關節炎治療之細胞、動物實驗及人體試驗，包括中藥材之提煉(現有成分)活性藥動力學研究，進一步研究關節炎成果、機轉、基因表現以至於中藥材之 in vitro、in vivo 實驗。關節炎之方法治療本科之進年研究方法及成果。本計畫預期完成下列實驗目標：1.建立軟骨細胞培養系統。2.利用細胞實驗探討 I.雷公藤 II.威靈仙內脂醇是否可影響軟骨細胞之間質分解酵素有所影響。3.探討何種機制參與 I.雷公藤 II.威靈仙內脂醇調控軟骨細胞之間質分解酵素表現。4.探討何種轉錄因子參與 I.雷公藤 II.威靈仙內脂醇調控軟骨細胞之間質分解酵素表現。		

• 英文摘要	Arthritis and related disorders are leading causes of activity limitation and disability in the adult population of world, where the economic costs of musculoskeletal illness have been conservatively estimated to be getting cost. A significant portion of these costs is attributable to arthritis. As the population ages, the impact of arthritis in terms of disability and associated economic cost is expected to increase. Research efforts continue to advance understanding of the pathogenesis and treatment of arthritic diseases. Osteoarthritis is the common disease now. Although osteoarthritis has been regarded primarily as a noninflammatory arthropathy, symptons of local inflammation and synovitis are present in many patients. Recently studies indicate that matrix metalloproteinases (MMPs) and cytokines, such as IL-1 and TNFa, are considered play a role in cartilage destruction with chronic arthritis. Chinese Herbal (Triptolide) has become widely used for the treatment of OA in China and Taiwan. However, its mechanism of action is incompletely understood. In this project, we try to shed a light on the molecular mechanisms of anti-arthritis by Chinese Herbal (Triptolide). Thus we want to accomplish the following goals: (1) Investigation of the anti-arthritis effect of Chinese Herbal (Triptolide) in primary cell culture systems and animal model. (2) Inhibition of molecular markers expression that are related to the development of arthritis by Chinese Herbal in primary cell culture system and animal model. (3) Evaluating the effects of Chinese Herbal on the gene regulation of molecular markers in primary cell culture system and animal model. (4) Evaluating the signal transduction pathways controlling molecular marker expression for further study on the effect of Chinese Herbal in arthritis.